What is claimed is:

1. A modular photocatalytic air purifier, the photocatalytic purifier comprising:

a modular enclosure having a retractable alignment mechanism, the retractable alignment mechanism being configured to move between an in-use position and a retracted position;

a plurality of support structures disposed within the modular enclosure, each of the plurality of support structures having a catalytic layer disposed thereon; and

at least one UV lamp interposed between the plurality of support structures.

2. The photocatalytic air purifier of claim 1, wherein the catalytic layer is comprised of titanium dioxide.

3. The photocatalytic air purifier of claim 1, wherein the plurality of support structures are comprised of a ceramic fiber substrate.

4. The photocatalytic air purifier of claim 1, wherein the plurality of support structures are comprised of a non-flammable substrate.

5. The photocatalytic air purifier of claim 4, wherein the plurality of support structures are comprised of a ceramic substrate.

6. The photocatalytic air purifier of claim 4, wherein the plurality of support structures are comprised of an aluminum substrate.

7. The photocatalytic air purifier of claim 1, wherein the catalytic layer is adapted to react with airborne volatile organic compounds and airborne bioaerosols flowing through the photocatalytic purifier when activated by the at least one UV lamp.

8. The photocatalytic air purifier of claim 7, wherein the at least one UV lamp oxidizes volatile organic compounds in contact with the catalytic layer.

9.The photocatalytic air purifier of claim 7, wherein the at least one UV lamp destroys bioaerosols in contact with the catalytic layer.

10. The photocatalytic air purifier of claim 1, wherein the plurality of support structures are comprised of a honey-combed material.

11. The photocatalytic air purifier of claim 1, wherein the plurality of support structures include a fin structure.

12. The photocatalytic air purifier of claim 1, wherein retractable alignment mechanism includes a hinged door structure that is retracted to provide access to the modular photocatalytic air purifier.

13. The photocatalytic air purifier of claim 12, wherein retractable alignment mechanism includes a support arm to hold the hinged door structure in place during installation and removal of the photocatalytic air purifier.

14. The photocatalytic air purifier of claim 1, wherein retractable alignment mechanism includes a sliding mechanism that slides the modular enclosure between the in-use position the retracted position.

15. The photocatalytic air purifier of claim 1, wherein the photocatalytic air purifier is disposed in a fan coil unit.

16. The photocatalytic air purifier of claim 1, wherein the photocatalytic air purifier is disposed in a duct.

17. A fan coil unit including an air return, a coil unit, a fan, and an air supply, the fan coil unit comprising:

at least one photocatalytic purifier including,

a modular enclosure having a retractable alignment mechanism, the retractable alignment mechanism being configured to move

between an in-use position aligned within the fan coil unit and a retracted position,

a plurality of support structures disposed within the modular enclosure, each of the plurality of support structures having a catalytic layer disposed thereon, and

at least one UV lamp interposed between the plurality of support structures; and

a control unit coupled to the at least one photocatalytic purifier, whereby the control unit energizes the at least one UV lamp in accordance with a fan coil operating mode.

18. The fan coil unit of claim 17, further comprising a media filtration filter disposed between the at least one photocatalytic purifier and the air return path.

19. The fan coil unit of claim 17, wherein the at least one photocatalytic purifiers includes a plurality of photocatalytic purifiers.

20. The fan coil unit of claim 17, wherein the catalytic layer is comprised of titanium dioxide.

21. The fan coil unit of claim 17, wherein the plurality of support structures are comprised of a paper substrate.

22. The fan coil unit of claim 17, wherein the plurality of support structures are comprised of a non-flammable substrate.

23. The fan coil unit of claim 22, wherein the plurality of support structures are comprised of a ceramic substrate.

24. The fan coil unit of claim 22, wherein the plurality of support structures are comprised of an aluminum substrate.

25. The fan coil unit of claim 17, wherein the catalytic layer is adapted to react with airborne volatile organic compounds and airborne bioaerosols flowing through the fan coil unit.

26. The fan coil unit of claim 25, wherein the at least one UV lamp oxidizes volatile organic compounds in contact with the catalytic layer.

27. The fan coil unit of claim 25, wherein the at least one UV lamp destroys bioaerosols in contact with the catalytic layer.

28. The fan coil unit of claim 17, wherein the at least one UV lamp is selectively energized in accordance with one of a plurality of air quality modes included in the control unit.

29. The fan coil unit of claim 28, wherein the plurality of air quality modes comprises:

an occupied mode whereby the control unit energizes the at least one UV lamp and selectively energizes the fan; and

an unoccupied mode whereby the control unit de-energizes the at least one UV lamp while regulating the coil to thereby maintain temperature within a predetermined temperature range.

30. The fan coil unit of claim 29, wherein the occupied mode further comprises:

a demand sub-mode wherein the fan and a valve are energized; and

a satisfied sub-mode wherein at least the valve is de-energized.

31. The fan coil of claim 28, wherein one of the plurality of air quality modes is selected by a switch.

32. The fan coil of claim 28, wherein one of the plurality of air quality modes is selected by a sensor.

33. The fan coil of claim 32, wherein the on-demand mode is selected in response to an output of an IAQ sensor.

34. The fan coil of claim of claim 17, wherein the plurality of support structures are comprised of a honey-combed material.

35. The fan coil of claim of claim 17, wherein the plurality of support structures include a fin structure.

36. The fan coil of claim of claim 17, wherein retractable alignment mechanism includes a hinged door structure that is retracted to provide access to the modular photocatalytic air purifier.

37. The fan coil of claim of claim 36, wherein retractable alignment mechanism includes a support arm to hold the hinged door structure in place during installation and removal of the photocatalytic air purifier.

38. The fan coil of claim of claim 17, wherein retractable alignment mechanism includes a sliding mechanism that slides the modular enclosure between the in-use position the retracted position.

39. A method for filtering air in a unit having an air return, and an air supply, the method comprising:

providing at least one modular photocatalytic purifier, the at least one photocatalytic purifier including a modular enclosure having a retractable alignment mechanism, and at least one UV lamp interposed between a plurality of titanium dioxide coated filter structures;

using the retractable alignment mechanism to dispose the at least one modular photocatalytic purifier in an in-use position within the unit;

directing air from the air return into the at least one photocatalytic purifier;

bringing contaminants borne by the air into contact with the titanium dioxide coated filter structures; and

directing UV radiation from the at least one UV lamp onto the titanium dioxide coated filter structures, whereby the titanium dioxide coated filter structures are activated to react with the contaminants to produce carbon dioxide and water.

40. The method of claim 39, wherein the step of radiating UV radiation includes destroying bioaerosols in contact with the filter structures.

41. The method of claim 39, wherein the step of radiating UV radiation includes oxidizing organic chemical compounds in contact with the filter structures.

42. The method of claim 41, further comprising:

providing a second UV lamp disposed between the photocatalytic purifier and the unit; and

directing UV radiation from the second UV lamp onto a fan coil unit or a drip pan.

43. The method of claim 39, wherein the step of directing UV radiation from the second UV lamp includes substantially neutralizing microbes developing on a fan coil unit or the drip pan.

44. The method of claim 39, further comprising:

providing a media filtration filter disposed between the air return and the photocatalytic purifier; and

trapping airborne particulate matter in the media filtration filter during the step of directing air from the air return path.

45. The method of claim 40, wherein the step of directing radiation includes selectively energizing the at least one UV lamp in accordance with an operational mode of a fan coil unit.